

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018663**Date Inspected:** 22-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** ShangHai, China**CWI Name:** Tian Lei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Summary of Items Observed: On this date Caltrans OSM Quality Assurance(QA) Inspector, DJ Shin was present during the times noted above for observations relative to the work being performed.

**Bay 1**

This QA Inspector observed the following work in progress for Bay 1.

ZPMC was using the Flux Core Arc Welding (FCAW) process.

ZPMC QC is identified as Zhu Jun.

Welding variables recorded by QC appeared to comply with the approved Welding Procedure Specification (WPS).

Listed below are the locations that were identified by this QA inspector.

Components: Barrier Rail

PCMK: E2-SB5-024-031

Welder: 216575

WPS-B-T-2132-3

PCMK: E2-SB1-019-031,062

Welder: 059450

WPS-B-T-2132-3

Heat straightening of PCMK, E2-SB1C-010, under approved Heat Straightening procedure, HSR 1(B)-9389, The in process temperature was at the time of this observation witnessed at less than 600°C. The ZPMC QC was

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identified as Zhu Jun. The approved HSR procedure stated that a maximum temperature of 650°C, with 1-3 applications. The distortion that was previously measured and recorded on the HSR was Maximum 8mm.

### Bay 2

This QA Inspector observed the following work in progress for Bay 2.

ZPMC was using the Flux Core Arc Welding (FCAW) process.

ZPMC QC is identified as Zhu Jun.

Welding variables recorded by QC appeared to comply with the approved Welding Procedure Specification (WPS).

Listed below are the locations that were identified by this QA inspector.

Components: Longitudinal Diaphragm

PCMK: LD3048-001-011,012

Welder: 045203

WPS-B-T-2132-3

Components: Grillage Plate

PCMK: SA7512-001-037

Welder: 068859

WPS-B-T-2233-TC-U5-F

PCMK: SA7512-001-064

Welder: 066674

WPS-B-T-2233-TC-U5-F

Components: Floor Beam

PCMK: FB3343-001-309

Welder: 066236

Report: B-WR17385

WPS-345-FCAW-2G (2F)-Repair-1

PCMK: FB3343-001-362

Welder: 067876

Report: B-WR17393

WPS-345-FCAW-2G (2F)-Repair-1

Components: Segment Assembly

PCMK: SEG3020M-012

Welder: 045268

Report: B-WR17486

WPS-345-SMAW-1G (1F)-Repair-1

### Bay 3

This QA Inspector observed the following work in progress for Bay 3.

ZPMC was using the Flux Core Arc Welding (FCAW) process.

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ZPMC QC is identified as Ai Wei.

Welding variables recorded by QC appeared to comply with the approved Welding Procedure Specification (WPS).

Listed below are the locations that were identified by this QA inspector.

Components: Segment Assembly

PCMK: SEG3019K-266

Welder: 050242

Report: B-WR17488

WPS-345-FCAW-3G (3F)-Repair-1

PCMK: SEG3019K-212

Welder: 055564

Report: B-WR17491

WPS-345-FCAW-3G (3F)-Repair-1

Heat straightening of PCMK, LD3041A-001, under approved Heat Straightening procedure, HSR (B)-436, The in process temperature was at the time of this observation witnessed at less than 600°C. The ZPMC QC was identified as Ai Wei. The approved HSR procedure stated that a maximum temperature of 650°C, with 1-3 applications. The distortion that was previously measured and recorded on the HSR was Maximum 20mm.

This QA inspector performed Ultrasonic Testing (UT) of approximately 10 % of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The member(s) is/are identified as follows; LD3040-001 Item number 10 of NWIT tracker document # 07454,

Bay 4

This QA inspector performed Ultrasonic Testing (UT) of approximately 10 % of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The member(s) is/are identified as follows; Splice Plates on Item number 1~9 of NWIT tracker document # 07454,

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Shin,DJ

Quality Assurance Inspector

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**Reviewed By:** Carreon,Albert

QA Reviewer